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STATISTICS *from the Author*

OF

UNNATURAL DEATHS

IN

MADRAS AND OTHER PRESIDENCIES AND
PROVINCES IN INDIA.

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(Reprinted from the Madras Quarterly Journal of Medical Science.)

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Statistics of Unnatural Deaths in Madras and other Presidencies and Provinces in India. By R. S. MAIR, Esq., M.D., and F.R.C.S.E., Deputy Coroner of Madras.

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THE recorded loss of human life from other than natural causes, though on the whole less in India in proportion to the estimated population, than it is in England and Wales, is still sufficiently great to demand attention.

In the following tables an attempt is made to bring into a comprehensive form the statistics of the yearly average number of Murders, Culpable Homicides or Manslaughters, Suicides and Accidental Deaths, in other words, all deaths not the result of purely natural causes, that occur throughout those parts of British India, from which the required data were procurable.

The statistics were originally intended to embrace the Presidency of Madras only, as the required materials for each district were in almost every respect complete. It was deemed advisable, however, to take a much wider range, and to extend the enquiry, so as to include every part of India from which the necessary information was procurable. The data, though much less complete and satisfactory for the other Presidencies and Provinces than for Madras, have been taken advantage of to construct such tables as may prove useful for comparison, as well as for statistical purposes generally.

The objects in preparing these statistics are, 1st. To point out what proportion these unnatural deaths bear to the entire population, and to the total mortality of the respective districts in which they occur.

2nd.—To compare the statistics of each class of unnatural deaths of one district with those of others in India, and with those of England and Wales, and 3rd, To suggest such measures as may be the means of preventing a considerable number of one class of these deaths from occurring, and thus save a number of lives to the state.

The data from which the tables have been prepared have been obtained principally from the Administration Reports (kindly supplied to me by the Chief Secretary to the Madras Government) of the several Presidencies and Provinces in British India, and also from the Reports of the Sanitary Commissioner and of the Inspector General of Police, Madras, as well as from the records in the Coroner's Office, Madras.

The method adopted has been to take the yearly average

of three year's records of each class of unnatural deaths, specifying the years whence the information was obtained.

This may appear too short a period to arrive at a satisfactory conclusion regarding a fair average, but it has been adopted for the sake of uniformity and in the absence of anything like reliable data for a longer period.

The following list comprises the Administration Reports that have been examined, and includes all the territories in India subordinate to the British Government.

Bengal, Madras, Bombay, Central Provinces, North-West Provinces, Punjaub Territories, Province of Oudh, British Burmah, Hyderabad Assigned Districts, Mysore, Coorg, and Travancore, (appended to the Madras Report.)

Six only of these reports contain the data more or less complete, for all classes of unnatural deaths, namely, Madras, Town of Bombay, Central Provinces, Punjaub Territories, Hyderabad Assigned Districts, and Mysore.

The reports for the Province of Oudh and for Coorg contain details of Murders, Culpable Homicides, and Accidental deaths, but make no reference to Suicides. Those for Bengal and the North-West Provinces refer to Murders and Culpable homicides only, and are destitute of any information regarding Suicides and accidental deaths.

For British Burmah we have data referring to Murders only, whilst the administration reports for the Bombay Presidency and for Travancore are barren of any data whatever (except in so far as relates to the Town of Bombay), regarding Murders, Culpable Homicides, Suicides, or accidental deaths.

It is much to be regretted that a uniform and regular system for recording and tabulating each class of unnatural deaths is not adopted in all the administration reports for India, in the same way as that in use for deaths from Natural Causes.

The report for Madras, containing as it does the fullest and most specific details of the kind required for this statistical enquiry, might well serve as a model for others in future.

The estimated population on which the calculations in these tables are based, is also taken from the respective Government Administration Reports.

These vital statistics are generally prepared through the ordinary agency of the Revenue officers, and do not therefore admit of a close analysis.

The Town of Madras for example, is stated by one authority (Municipal) to contain 427,771 inhabitants; while by another (Government) the population is estimated at 675,390. The returns in most cases cannot, at present, be regarded as more than an approximation to accuracy, and they must necessarily continue to be so, until a regular and uniform system for taking the census on something like the English model has been organized by the Government of India.

A systematic census has been taken with a fair amount of success and with far less difficulty than was anticipated of several large districts in India, the North-West Provinces, Central Provinces, and the Town of Bombay for examples; but in the absence of any legislative enactment compelling under penalties correct returns, the total estimated population in any given district must obviously be open to doubt, and cannot therefore be implicitly relied upon.

Allied to the census is the registration of deaths. Mortuary statistics can serve very little purpose, and cannot be complete or depended on until a compulsory registration of every death is adopted. The system (almost universally practised) of optionally recording a death can never result in reliable statistics.

Information of a death and of its cause has, until very recently, been obtained at the place where human bodies are buried or burnt, and the method adopted in Madras for obtaining the mortuary return is as follows: "Each mortuary accountant makes a daily visit to the different Christian, Mahomedan, and Hindu burial grounds lying within the division of which he is in charge. The Vettyan (grave digger or burner of bodies,) gives them, or, to speak more accurately, is supposed to give them the number of persons who have been interred or burnt the day previous, with as much information as he possesses, concerning the age, occupation, and cause of death of the deceased. It often happens that the Vettyan who was on duty the day previous is absent at the time of the mortuary accountant's visit; the information is then obtained second-hand from some person who has been left in charge of the ground. If the Vettyan is unable to give the particulars connected with the deaths among Hindoos on the day following the interment, he obtains it from the friends of the deceased on a subsequent day (the two or three days after the actual burying or burning) of funeral ceremonies, known as the milk day."*

* Report of Sanitary Commissioner.

It is obvious that such a system as this could never lead to anything like satisfactory results. In the Town of Madras alone there are upwards of three hundred burial and burning grounds. Every caste, and indeed every petty subdivision or section of every caste, in some instances even families among the Mahomedans, have their own spots; in many cases not more than a few square yards in extent, for burying or burning their dead. These are recognised as such by the local municipal authorities, but neither they nor the Police have any control over these burial or burning grounds, beyond limiting the depth of graves, or exercising sanitary supervision. With the exception of the Christian cemeteries, very few of the large number of burial or burning grounds referred to, have any responsible person in charge, persons whose duty it ought to be to record the death.

No books or records are at present kept by the Vettyan, or grave digger; all the information given by him, when required, is from memory, and as there is no legal obligation or order in force even to guide him; one result is, that bodies of persons who have died from violence, or from other than Natural Causes, are buried or burned without any investigation being made into the cause of death.

It is only when the Police, acting upon information they may have casually received after the body has been disposed of, that any notice is taken of the case. It is then reported to the Coroner, or other functionary exercising the same power, when he is obliged to order the body to be exhumed for the purpose of holding an inquest, a proceeding which is obviously impossible, when the body has been burned.

But the burial and burning grounds recognised as such, are not the only places used by the Hindoos for disposing of their dead. The first born child of particular castes, if it dies within a certain period after birth, sometimes as far as the fifth year of age, is according to a long-established custom, buried within the precincts of the house in which it died.

The body remains there for a certain period, usually about six months, when it, or rather the remains, are disinterred and removed to a regular burial ground, or even thrown out into some field. In the meanwhile however, that is almost immediately after the death of the child, an effigy of its body, made of flour paste, is conveyed with all the usual ceremonies to a recognized burial or burning ground, and there disposed of in precisely the same manner as the original body would have been.

This custom, almost universal throughout India, has its origin in a belief entertained by the Hindoos that the Muntrum men, or sorcerers, take possession of the skulls of first-born children buried, for sorcery purposes, and that if the skull is so taken, the woman whose child the skull belonged to, will never conceive again. This method of burial in a private or unrecognised place is forbidden by a clause in the Madras Municipal Act, and probably in all such Acts elsewhere, empowering a Magistrate to inflict a heavy money penalty on any person infringing it.*

But it appears that while this penalty can be inflicted for infringing this clause in the Act referred to, no one has the power to compel the friends to remove the dead body after it has been buried in the house, unless the deceased child is reported to have died from other than Natural Causes. The fine is paid by the party convicted, or it may be, by the caste to which he belongs, rather than have a time-honored and general custom broken through, and the body of the child remains in this private burial ground till about six months expire.

This custom, for reasons perfectly obvious, is open to the gravest mischief, while it affords another illustration of the method by which bodies of persons who die unnatural deaths, may be disposed of without any investigation being made into the cause of death.

Another custom prevails amongst a very large section of the Hindoo community with reference to the disposal of their dead, which is believed to be taken advantage of, not unfrequently, for the worst purposes, and that is, the burial or burning of their dead at late hours of the night.

Within a very short period, sometimes almost immediately after a Hindoo dies, the friends hasten to inter or burn the body. The reason assigned for this, is that a dead body excites feelings of repugnance and uncleanness in the minds of the friends and neighbours, and that until it is carried away, neither those in the house nor in the neighbourhood can either eat or drink, or go on with their usual occupation.

It is not difficult to conceive that such a custom as this might be easily taken advantage of as a means of committing the most heinous crimes. A man, for example, returns to his house at night from his ordinary duties, and he takes his

* A case occurred very lately in which a party convicted of this offence was fined a sum (10 Rupees), far too trifling to deter others from acting in the same way in future.

meal, containing it may be the most deadly poison, which causes his death within an hour or two afterwards. The body is at once removed, and either buried or burnt, the cause of death being probably reported, if reported at all, as due to Diarrhœa or Cholera.

Possibly though rarely, for fear of caste combination, some suspicious circumstance oozes out in connexion with the death, and the Police become acquainted with and duly report the case. But meantime the body may be burned, and then the strongest and most reliable evidence in cases of this nature, namely, that obtained by chemical analysis is set at defiance.

The domestic feuds that are so common amongst the Hindoos, the revengeful spirit which actuates and clings to them, passing even from one generation to another, and the great facilities which exist for obtaining poison in the bazaars, render it very probable that this custom referred to, is taken advantage of to perpetrate the most serious crime, and thus others are added to the number of unnatural deaths unrecorded and unrecognised as such.

The difficulties which stand in the way of any interference with Hindoo burial or burning grounds, with the interment of first-born children in private grounds, and with night funerals, though unquestionably great, owing to the deeply rooted prejudice and antipathy of the native to any interference with long established customs, are not more so than the difficulties which have been so effectually overcome, with reference to other long standing customs, Suttee and the swinging feast, for example, believed to be closely identified with the Hindoo religion, and which formerly were the cause of many unnatural deaths occurring throughout India.

The Municipal Acts now in operation almost everywhere throughout India, all constructed on the same model, confer powers sufficient to meet some of the difficulties referred to.

Existing grave and burning grounds can be closed and other places set apart for the same purposes. Responsible persons ought to be placed in charge of these grounds, persons whose duty it should be not to permit any body to be buried or burned without a certificate from the District Registrar.

With reference to Registrars, there is an omission in the

Municipal Acts of sufficient importance to call for remark. At present the Registrars of Death, appointed under these Acts record every death and its cause according to the information given them, and there their functions cease.

A considerable number of deaths may thus be registered, respecting which no sufficient evidence of the cause of death is produced; and persons whose deaths are thus registered may be interred without any enquiry being made into the manner in which they came to their death.

It is evident that such a system as this is fraught with danger to the public. It would be no difficult matter,

1st.—To require that incomplete or irregular information regarding a death be sent to the Coroner, or other similar officer, before registration.

2nd.—That every Registrar be instructed *not* to register any death that has occurred from violence, or from other than Natural Causes, or even any death that has occurred suddenly without any known cause, until the case is referred to the Coroner, and his decision given to the Registrar whether he will hold an inquest or not.

Magistrates should have the power not only to inflict a penalty for interring bodies in other than authorized burial grounds, but also to compel the removal of bodies so interred.

No dead body should be permitted to be buried or burned, except within specified hours, say between sunrise and sunset.

None of these measures would, if carried out, seriously violate or offend the religious prejudices of the Hindoos, and there is little doubt that they might be enforced with little or no difficulty, beyond that incidental to anything bearing the shape of an innovation. They might be the means of preventing some unnatural deaths, while they would bring to light others that, under present circumstances, pass unrecorded as such.

MURDERS.

Table I. gives the yearly average number of Murders for each district of the Madras Presidency. The averages are based on a calculation of the Murders for two years only, viz., 1864 and 1866, the data for these years being complete, those for 1865, referring only to each of the four ranges of which the Presidency is composed.

TABLE I.—Murder and Culpable Homicide in the Madras Presidency.
Yearly Average.

Years. 1864-5 and 1866-7.	Murder.	Culpable Homi- cide.	Proportion of Murder to Popula- tion.	Proportion of Culpable Homi- cide to Population.
Ganjam	33	17	1 in 34,452	1 in 66,878
Vizagapatam	19	9	1 in 74,508	1 in 157,295
Godavery	12	3	1 in 113,903	1 in 455,610
Kristna... ..	12	4	1 in 99,535	1 in 298,605
Nellore	10	3	1 in 99,925	1 in 333,085
Kurnool... ..	15	2	1 in 48,385	1 in 362,884
Bellary... ..	29	3	1 in 42,575	1 in 411,518
Cuddapah	13	4	1 in 80,777	1 in 262,526
North Arcot	16	4	1 in 103,410	1 in 413,639
Madras	5	1	1 in 135,078	1 in 675,390
South Arcot	6	3	1 in 188,072	1 in 376,143
Tanjore	5	7	1 in 330,834	1 in 236,310
Trichinopoly	3	1	1 in 313,133	1 in 939,400
Madura	9	7	1 in 206,267	1 in 265,201
Tinnevelly... ..	9	2	1 in 185,585	1 in 835,131
Salem	11	6	1 in 135,766	1 in 248,904
Coimbatore	10	5	1 in 121,592	1 in 243,184
South Malabar	16	5 }	1 in 68,363	1 in 284,847
North Malabar	9	1 }		
South Canara	16	8	1 in 49,253	1 in 98,505
Yearly average of 2 years' Total	258		1 in 93,824	1 in 254,805
Total for 1864-5... ..	272	81		
Do. for 1865-6... ..	232	76		
Do. for 1866-7... ..	242	106		
Average of 3 years	248	88		

From this table it appears that during the years 1864, 1865, and 1866, the total number of murders reported, amounted to 272, 232, and 242 respectively, or an average of 248 yearly.

Ganjam and Bellary occupy the first position. The number of murders is not only absolutely the highest in these two districts, but it is also the highest in proportion to the population. In Ganjam, one in 34,452, and in Bellary, one in 42,575 falls by the hand of an assassin.

Kurnool and South Canara stand second, in the former one in 48,385, and in the latter one in 49,253 are murdered. In Vizagapatam, Cuddapah, Kistna, Nellore and Malabar, the proportion ranges from 1 in 68,000 to 1 in 99,000, Malabar having the highest and Nellore the lowest proportion.

In the Godavery, North Arcot, Madras, South Arcot, Tinnevely, Salem and Coimbatore Districts, the proportion ranges from one in 100,000 to 1 in 188,000, Tinnevely having the lowest proportion and North Arcot the highest.

Tanjore, Trichinopoly and Madura have a proportion ranging from 1 in 206,000 to 1 in 330,000, Tanjore having the lowest proportion and Madura the highest.

Taking the total yearly average (258) of the two years (1864—66) referred to, the proportion of murders reported to have been committed throughout the Madras Presidency, amounts to 1 in 93,824 ; but when we take the yearly average (248) of the three past years, the proportion is 1 in 97,607, a proportion considerably less than that which exists in England and Wales, where it is 1 in 91,210.

Table II. gives the yearly average number of Murders in all those Presidencies, Provinces, and Territories throughout India from which the required data were procurable.

TABLE II.—Murders.

Yearly average with proportion to Population.

	Years.	Murder.	Population.	Proportion to Population.
Bengal	1865 & 6	257	37,505,922	1 in 145,937
Madras... ..	1865-6-7	248	24,206,509	1 in 97,607
Bombay (Town) ...	1864-5 6	5	566,119	1 in 113,224
North-west Provinces	1865-6-7	319	27,803,519	1 in 87,158
Central Provinces...	1865-6-7	92	9,104,511	1 in 93,961
Punjaub Territories.	1864-5-6	275	15,766,157	1 in 57,332
Oudh... ..	1863 4-5	102	9,000,000	1 in 88,235
British Burmah...	1864 5-6	48	2,273,049	1 in 47,355
Hyderabad Assigned Districts... ..	1864-5 6	23	1,535,935	1 in 66,780
Mysore... ..		55	4,013,601	1 in 72,975
Coorg... ..	1864	1	119,118	1 in 119,118
Total...	...	1,425	131,894,440	1 in 92,557
England and Wales.	...	...	...	1 in 91,210

This table embraces nearly every part of India, and in respect to the data necessary to complete the table, the statistics are more complete than those referring generally to suicides and accidental deaths.

The Administration Reports for the past five years have been examined for the required information, and some of them containing no reference whatever to Murder, will explain why the average of three years only is taken, and also why the data for all the districts are not taken from corresponding years. As a rule, the average available numbers for three years have been taken, and the exceptions to this are Mysore and Coorg, from which provinces the data for two years and one year respectively were only obtainable.

From this table it appears that 1,425 murders are annually committed throughout the greater part of India, embracing a population of close upon 132 millions.

In British Burmah, the number relative to the population is the highest of all, being 1 in 47,355.

The Punjab Territories stand next, having a proportion of 1 in 57,332, and the Hyderabad Assigned Districts occupy the third position, with a proportion of 1 in 66,780.

Mysore, North-West Provinces, and the Province of Oudh, have a proportion ranging from 1 in 72,975 to 1 in 88,235, Mysore having the highest, and Oudh the lowest proportion to the population.

In the Madras Presidency and the Central Provinces, the proportion is 1 in 97,607 and 1 in 98,961 respectively, while for Bengal, Town of Bombay and Coorg, the proportion ranges from 1 in 113,000 to 1 in 150,000, Bombay having the highest and Bengal the lowest proportion to the population.

The total average annual number of Murders for all the places specified amounts to 1,425, being at the rate of 1 in 92,557.

This is a little less than it is in England and Wales, where the proportion of Murders to population is 1 in 91,210.

From this analysis, it appears that in British Burmah, the Punjab Territories, and the Hyderabad Assigned Districts, the largest number of Murders in proportion to the population is committed. Of those committed in the Punjab, a considerable number are reported to have occurred in districts bordering on the North-West frontier, where the

Mahomedan population on both sides of the border is notoriously addicted to revenge ; while, from the necessity of frontier defence, the people are allowed to retain their arms. "The people in the Peshawar districts are armed, and full of enmities and partizanships. Bravos are to be had on hire from the independent hills, the borders are close at hand for flight, every village is divided into, at least, two rival factions, and the police is of insufficient strength."

In Hyderabad District, the population is composed of the most turbulent and excitable elements, and there also, almost every man is armed with formidable and deadly weapons. In all these places our territories are closely adjacent to others ruled by independent native sovereigns, and the facilities for escape are greater there than elsewhere in India.

No information was procurable from the several administration reports to indicate how these murders were committed, or the sexes and ages of the persons whose lives were sacrificed.

From the reports of the Inspector General of Police for Madras, it appears that during the past three years, twice as many males as females have been murdered throughout the Presidency.

In the Town of Madras, the returns during a series of years show that new-born children, and children under five years of age, are by far the most frequent victims of this crime. It may safely be assumed that the same holds good with reference to every other district in India, and we need not go far to look for some of the chief causes of this.

The social custom forbidding the re-marriage of Hindoo widows is unquestionably the cause of the destruction of a vast number of new-born and even unborn children.

A Hindoo female marries at a very early age, generally between the 5th and 10th year of her life, and her husband may die before she has reached her teens. But as she is forbidden by this inexorable custom to marry again, clandestine intercourse and concealed pregnancy too frequently follow.

The most violent mechanical and medicinal measures are resorted to, to destroy the child before or after it is born, and a class of women exist everywhere, who are at all times ready and willing to effect the desired purpose.

The life of the mother is not unfrequently sacrificed in these cases after that of the child.

In the Town of Madras alone 47 new-born children and fœtuses were reported to have been found during the past three years. These new-born children are commonly found in cess-pools, tanks, ditches, drains, or even on the roadside, under circumstances which leave no doubt that they were cast away to conceal the fact of their death. In most of these cases, there are the usual indications of the child having been born alive, and the navel cord has most commonly not been tied. They are, moreover, unwashed, and present no indications of the ordinary care having been taken of them which is bestowed on children born dead, when women are surrounded with the assistance which they ought to have. In some instances there is unmistakable evidence of violence; the mouth is stuffed with cloths, and tightened cords found round the neck, thus leaving no doubt that the child has been murdered. Yet, in very few instances, have the Police been able to find out the mother or the person who destroyed the child.

In those cases when children under 5 years of age are destroyed, the inducement to commit murder is most commonly plunder. The silver and gold ornaments with which respectable natives decorate their children, is a frequent temptation to destroy the child. The child is usually decoyed away from its home, and in some retired spot murdered for the sake of the ornaments on its body.

Reported cases of murder by poison are exceedingly rare, and yet in perhaps no other part of the world do there exist greater facilities for procuring poison than in the bazaars and gardens of India. Arsenic and its various compounds, Corrosive sublimate, Opium, Stramonium, and other deadly poisons are openly sold in the bazaars in any quantity, and unrestrained by any license, while many other equally deadly poisons are to be found in gardens. With such facilities for procuring poison, there is little doubt that advantage is taken of them to commit murders which are never recorded as such, and when some suspicious circumstance does ooze out afterwards, all attempts to prove the crime are rendered abortive by the absence of the best of all evidences, viz., the dead body, which has been burned within a few hours after death.

The Government of India a few years ago proposed to introduce a law for all India to restrict the sale of poisons,

except under license, and to reward informers in case where the offence is that of selling poison, or exposing them for sale without a license.

CULPABLE HOMICIDES OR MANSLAUGHTERS.

Table I.* gives the yearly average number of recorded cases of Culpable Homicide not amounting to Murder throughout the Madras Presidency. Ganjam and South Canara stand highest, the first having a proportion of 1 in 66,878, the latter 1 in 98,503. In the Districts of Vizagapatam, Kistna, Cuddapah, Tanjore, Madura, Salem, Coimbatore, and North and South Malabar, the proportion ranges from 1 in 155,000 to 1 in 300,000, Vizagapatam having the highest proportion, and Kistna the lowest of these districts. In the remaining districts, the proportion ranges from 1 in 330,000 to 1 in 939,000, Nellore having the highest, and Trichinopoly the lowest proportion to the population.

Taking the total average (95) for the two years for which complete data were available, the proportion of cases of culpable homicide to the entire population amounts to 1 in 254,805, but taking the total average (88) for three years, the proportion is reduced to 1 in 275,054.

In Table III. is given the yearly average of the same class of deaths in all those Presidencies, Provinces, and Territories in India, from which data were procurable.

TABLE III.—Culpable Homicide.

Yearly average with proportion to Population.

	Years.	Number.	Population.	Proportion to Population.
Bengal	1865-6	245	37,505,932	1 in 153,085
Madras... ..	1865 6 7	88	24,206,509	1 in 275,074
Bombay (Town) ...	1864-5-6	4	566,119	1 in 141,530
North-west Provinces	1865-6-7	202	27,803,519	1 in 137,640
Central Provinces...	1865-6-7	23	9,104,511	1 in 395,848
Punjaub Territories.	1864-5	103	15,766,157	1 in 153,069
Oudh... ..	1863-4-5	54	9,000,000	1 in 166,667
Hyderabad Assigned Districts... ..	} 1864-5-6	5	1,535,935	1 in 307,187
Mysore	1864	31	4,013,601	1 in 129,458
Total...	...	755	129,502,283	1 in 171,526

* Vide page 8.

Mysore, North-West Provinces and the Town of Bombay have a proportion ranging from 1 in 129,458 to 1 in 144,530. Mysore having the highest and Bombay the lowest ratio to the population. In Bengal, Province of Oudh, and the Punjab Territories, the proportions are less than the preceding, those for Bengal and the Punjab being nearly equal, while for Madras, Hyderabad Assigned Districts, and the Central Provinces, the proportions range from 1 in 275,000 to 1 in 395,841, Madras having the highest, and the Central Provinces the lowest proportion to the population.

The total average annual number of cases of culpable homicides, to a population estimated at close on 130 millions, is 755, being at the rate of 1 in 171,426.

No statistics were available to institute a comparison of this class of unnatural deaths with the same class in England, neither was any information to be obtained as to how death was caused in these cases in India, nor as to the ages or sexes of the persons whose lives were destroyed.

In the Madras Presidency a considerable number of cases of culpable homicide are the result of very slight causes. The violence used is very frequently exceedingly trivial, amounting often to a very small superficial wound or abrasion of the skin, or a slap or slight blow with the hand or foot. In the one case (wound), tetanus, and in the other rupture of the spleen follow, and death sooner or later ensues, converting what would have been considered the mildest form of assault, if the person had lived, into the serious crime of culpable homicide not amounting to murder.

From some cause or other, hitherto unexplained, the constitution of the native of India is remarkably susceptible to tetanus. The slightest possible form of external injury, such as a simple abrasion of the cuticle, frequently terminating in tetanus and death.

In those instances where rupture of the spleen has been the immediate cause of death, that organ is invariably more or less enlarged, sometimes enormously so, as well as soft and friable. A slight blow, such as that produced by a flat open hand, a kick, even a simple push of the person, have in many cases caused rupture of the spleen, followed by hæmorrhage into the cavity of the abdomen, and death generally within twelve hours afterwards.

In some notoriously malarious districts of the Madras Presidency, enlargement of the spleen is looked upon as a matter of course in almost all the natives residing there, and

his enlargement of the organ does not appear to be inconsistent with a fair amount of health generally.

SUICIDES.

Table IV. gives the yearly average number of suicides in every district of the Madras Presidency.

1 early average for 1865, 6 and 7.

DISTRICTS.	By Drowning.		By Hanging.		By Poison.		By Other Causes.		Total.		Proportion to Population.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Ganjam	10	11	19	11	...	...	7	3	36	25	1 in 18,638
Vizagapatam...	14	36	3	9	...	...	6	2	33	47	1 in 17,696
Jeypore	1	2	14	5	...	...	2	1	7	8	15 in 20,000
Godavery	28	82	6	5	...	1	2	...	36	88	1 in 11,023
Kristna	19	53	...	2	...	...	1	...	26	55	1 in 15,926
Nellore	28	41	...	2	...	...	1	...	36	43	1 in 12,649
Kurnool	11	37	6	2	1	...	2	...	20	39	1 in 12,301
Bellary	12	61	14	4	...	1	5	...	31	46	1 in 16,035
Cuddapah	22	52	4	4	...	...	3	4	29	60	1 in 11,799
North Arcot...	24	71	9	1	1	1	8	5	42	78	1 in 13,788
Madras	6	17	4	...	1	1	...	...	11	18	1 in 23,289
South Arcot...	6	14	10	4	...	1	...	2	17	21	1 in 29,696
Tanjore	4	7	7	2	...	1	1	...	12	10	1 in 75,190
Tichinopoly...	2	9	4	3	...	1	1	...	7	13	1 in 46,970
Madura	9	23	11	6	...	1	...	...	20	30	1 in 37,128
Tinnevelly ...	5	14	18	12	1	4	1	1	15	31	1 in 36,310
Salem	6	17	3	3	1	...	1	...	21	20	1 in 36,425
Coimbatore ...	19	41	10	9	...	...	...	...	29	50	1 in 15,391
South Malabar.	5	7	31	8	...	1	5	1	41	17	} 1 in 20,591
North Malabar.	4	4	13	2	...	...	2	...	19	6	
South Canara..	5	12	21	7	1	3	...	...	27	22	1 in 16,082
Total ..	240	611	214	101	6	16	49	19	509	747	1 in 19,273

From this table, it appears that 1,256 or 509 males and 747 females destroy themselves annually. In all the districts, with the exception of North and South Malabar and South Canara, drowning is by far the most frequent method adopted to commit suicide. In the exceptional districts specified, hanging seems to be preferred.

In the Godavery, Cuddapah, Kurnool, and Nellore Districts, the proportion of suicides from all causes ranges from 1 in 11,023 to 1 in 12,649, Godavery having the highest and Nellore the lowest proportion to the population of these districts. In North Arcot, Coimbatore, Kistna, Bellary, and South Canara, the proportion ranges from 1 in 13,788 to 1 in 16,082, North Arcot having the highest and South Canara the lowest.

Vizagapatam, Ganjam, Jeypore, and Malabar have a ratio of 1 in 17,696 to 1 in 20,591, Vizagapatam having the highest and Malabar the lowest proportion. In Madras, South Arcot, Tinnevely, Salem, and Madura, the ratio ranges from 1 in 23,289 to 1 in 37,128, Madras having the highest and Madura the lowest proportion, while Trichinopoly and Tanjore have respectively the very low ratio of 1 in 46,971 and 1 in 75,190.

The total average yearly number of suicides for all the districts of the Presidency, with an estimated population of about $24\frac{1}{2}$ millions, is 1,256, being at the rate of 1 in 19,273.

This proportion is considerably less than that which exists in England and Wales, where it is 1 in 15,200.

Table V. refers to suicides in those Presidencies and Provinces in India, from which the required data were procurable. This table is much less complete than the preceding, inasmuch as in most instances the total number only of suicides from all causes is given. From this table it appears that in Coorg the very high proportion of one in 9,163 persons destroy themselves annually. In Madras, Town of Bombay, Hyderabad Assigned Districts, and Mysore, the proportion ranges from 1 in 17,258 to 1 in 20,169, Hyderabad having the highest proportion and Mysore the lowest. In the Central Provinces and the Punjab Territories, the proportions are 1 in 25,574 and 1 in 67,377 respectively. The total number of suicides for all the territories specified in the table amounts to 2,176, being a proportion of 1 in 25,300, a ratio also considerably less than in England and Wales.

Of the various methods of committing suicide drowning occupies pre-eminently the first position, and after it comes hanging. In the one case 70 per cent. and in the other 20 per cent. of all suicides in the Madras Presidency are effected by either of the above methods.

In England, hanging occupies the first position, then follow poisoning, cut-throat, and lastly drowning.

In India, nearly twice as many females as males destroy themselves, whilst the reverse is the condition in England.

In India men resort to drowning and hanging as a means of self-destruction in about equal numbers, while 6 out of 7 women who commit suicide prefer the water.

In England four times as many males as females destroy themselves by hanging, and four times as many males as females by cut-throat, whilst the number of males and females who commit suicide by drowning and by poison is about equal.

In India, at all events in the Madras Presidency, very nearly three times as many females as males destroy themselves by drowning, twice as many males as females by hanging, and nearly three times as many females as males by poison.

The number of suicides by lethal weapon is exceedingly small, compared with that which exists in England. Persons very rarely destroy themselves in India by stabbing, shooting, or cut-throat, and when such cases do occur, they are more frequently committed by Europeans than by Natives.

The most common causes of suicide in India are, jealousy, family discord, destitution, and physical suffering. Jealousy, with all the bitter feelings which it engenders is the cause of a large number of female suicides.

The position of a wife in India is very different from what it is in England. Having no social status, or if any, a very degraded one; regarded by their husbands more as a servant than as a companion; absolutely passive in everything and subject to the will and caprice of the lords of their destiny, the Hindoo wife is commonly treated with contempt, severity, and cruelty.

A Hindoo marries not so much to gain the affection and

sympathy of one who will share with him the trials and assist him in his struggles with the world, as to have possession of one who will bear children and be subservient to his rule and passions. Mutual confidence, kindness, or concord are therefore rarely found to exist amongst them.

The undivided family of a Hindoo (numbering many members of different degrees of relationship) may have many of the advantages ascribed to it, but it is unquestionably a fruitful source of the most serious family quarrels.

The young wife thrown into such a family, invariably at a very tender age, is too frequently treated in such a harsh and domineering manner, as to drive her to despair, when she resorts to self-destruction as the only effectual means of relieving her from a miserable existence.

These family discords, as well as the loose and immoral lives too often led by the husbands, are not only the most common cause of suicide of young women, but also account for the larger number of females than males putting an end to their lives.

It may appear strange that in a country where the necessities of life are perhaps cheaper than in any other that there should be any destitution.

But scarcely a year passes without one or more districts suffering the greatest privation and distress owing to the entire absence, or it may be the too great abundance, of the periodical rains destroying the crops. The experience of the year 1866 has forcibly and painfully impressed upon us not only that simple destitution may prevail in one or two districts, but that a famine, gigantic in its proportion and disastrous in its effects may occur and sweep off thousands into a premature grave. It need be no matter for surprise then, that many men and women, driven to despair by the mental depression induced by the destitution, should have destroyed themselves by jumping into wells and tanks as the only relief to their misery.

The number of suicides committed in the memorable year referred to, were considerably beyond the average, and the increase was chiefly in those districts of the Madras Presidency where the ordinary necessities of life were not procurable, except at prices far beyond the means of the lowest classes. Men and women, and women with children, were reported to have destroyed themselves together by drowning.

Physical suffering is another frequent cause of suicide. It is astonishing how many persons, (males and females, in about equal numbers,) destroy themselves for apparently the most trifling causes. The records of the Coroner's Office in Madras afford abundant evidence of this. Pains in the chest and pains in the abdomen, from dysentery in men and menstruation in women, are the cause of a large number of suicides. Cases are on record where females have been known to put an end to their lives, rather than endure the pain of tooth-ache.

ACCIDENTAL DEATHS.

Table VI. gives the yearly average number of accidental deaths throughout every district of the Madras Presidency. From the table, it appears that the total average number of this class of deaths that occur every year amount to 6,767, or 3,872 males and 2,935 females.

[Table VI.]

TABLE VI.—Accidental deaths in the Madras Presidency with proportion to Population.
Yearly average for 1865, 6 and 7.

DISTRICTS.	By Drowning.		By other Causes.		Total.		Grand Total.	Population.	Proportion to Population.
	Males.	Females.	Males.	Females.	Males.	Females.			
Ganjam ...	72	74	104	58	176	132	308	1,136,926	1 in 3,691
Vizagapatam	106	62	156	45	262	107	369	,415,652	1 in 3,836
Jeypoor ...	12	4	60	13	72	17	89	300,000	1 in 3,371
Godavery ...	130	95	92	31	222	126	348	,366,831	1 in 3,927
Krishna ...	100	91	79	36	179	127	306	1,194,421	1 in 3,903
Nellore ...	105	145	97	32	202	177	379	999,254	1 in 2,637
Kurnool ...	61	81	64	25	125	106	231	725,768	1 in 3,142
Bellary ...	125	137	87	39	212	176	388	1,234,674	1 in 3,182
Cuddapah ...	118	220	43	22	161	242	403	1,050,104	1 in 2,606
North Arcot	246	325	51	27	297	352	649	1,654,557	1 in 2,549
Madras ...	98	76	42	18	140	94	234	675,390	1 in 2,886
South Arcot	157	129	80	31	237	160	397	1,128,430	1 in 2,842
Tanjore ...	116	101	73	26	189	127	316	1,654,170	1 in 5,235
Trichinopoly	66	62	38	21	104	83	187	939,400	1 in 5,024
Madura ...	108	100	39	16	147	116	263	1,856,406	1 in 7,059
Tinnevely ...	86	88	57	13	143	101	244	1,670,262	1 in 6,845
Salem ...	113	199	40	10	153	209	362	1,493,421	1 in 4,125
Coimbatore	182	184	92	19	274	203	477	1,215,920	1 in 2,549
South Malabar	104	102	72	11	176	113	289	1,709,081	1 in 3,849
North Malabar	61	37	50	7	111	44	155		
South Canara	97	85	133	38	230	123	353	788,042	1 in 2,232
Total...	2,263	2,397	1,549	538	3,812	2,935	6,747	24,206,509	1 in 3,588

In the districts of South Canara, Nellore, Coimbatore, North Arcot, Cuddapah, South Arcot, and Madras, the proportion of accidental deaths to the population ranges in the order above from 1 in 2,232 to 1 in 2,886, South Canara having the highest proportion and Madras the lowest.

In the districts of Kurnool, Bellary, Jeypore, Ganjam, Vizagapatam, Malabar, Kistna, and Godavery, the proportion ranges from 1 in 3,142 to 1 in 3,927, Kurnool having the highest and Godavery the lowest proportion to the population.

In Salem, Trichinopoly, Tanjore, Tinnevely, and Madura, the proportion ranges from 1 in 4,125 to 1 in 7,059, Salem having the highest and Madura the lowest proportion.

For all the districts specified in the table, embracing the four great ranges of the Presidency, and with a population of about $24\frac{1}{2}$ millions, the proportion is 1 in 3,588, while that for England and Wales, on an average of six years, is one in 2,115, or very nearly 50 per cent. more than that for Madras.

In this table the accidental deaths are divided into two classes only, viz.: those from "drowning" and those "from other causes." Under the latter class are included all deaths from snake-bite, wild beasts, &c., but sufficient data were not procurable to arrive at a satisfactory conclusion as to the average number of deaths from these specific causes.

In the absence of such data however a table is given,* showing the number of recorded deaths from snake-bite and wild beasts for the years 1866 and 1867, these years being the first in which any attempts were made to record this class of deaths.

Table VII. gives the yearly average number of accidental deaths for all the Presidencies, Provinces, and Territories in India, from which the required data were procurable.

[Table VII.]

TABLE VII.—Accidental deaths.
Yearly average with proportion to Population.

	Years.	By Drowning.	By Wild Beasts.	By Snake-bite.	By other Causes.	Total.	Population.	Proportion to Population.
Madras...	1865-6-7	4,660	...	...	2,087	6,747	24,206,509	1 in 3,560
Bombay (Town)	1864 5-5	30	...	...	113	149	566,119	1 in 3,799
Central Provinces ...	1866-7	957	622	578	521	2,678	9,104,511	1 in 3,400
Punjab Territories ...	1865-6	...	179	710	2,677	3,566	15,766,157	1 in 4,421
Oudh...	1863-4-5	1,842	125	820	999	3,786	9,000,000	1 in 2,377
Hyderabad Assigned } Districts. ... }	1863-4-5	216	37	...	306	559	1,535,935	1 in 2,748
Mysore...	1863-4	...	69	...	1,234	1,303	4,013,601	1 in 3,080
Coorg ...	1864	...	1	...	33	34	119,118	1 in 3,503
Total...	...	7,711	1,033	2,108	7,970	18,822	64,311,950	1 in 3,408
England and Wales. ...	...	...	..	...	...	...	...	1 in 2,115

This table is incomplete, inasmuch as in some instances the causes of these deaths are divided into four great classes, namely, drowning, snake-bite, wild beasts, and other causes, whilst in other instances, the total of all causes only is given, without any specification whatever.

The Province of Oudh and the Hyderabad Assigned Districts appear from this table to have the highest proportion of recorded accidental deaths to the population, the number being 1 in 2,377 and 1 in 2,748 respectively.

In Mysore, Central Provinces, Coorg, Madras, and Town of Bombay, the proportion ranges in the above order from 1 in 3,080 to 1 in 3,799, Mysore having the highest and Town of Bombay the lowest proportion to the population. In the Punjaub Territories, the proportion is lowest of all, being 1 in 4,421.

The total number of recorded accidental deaths for all the Presidencies and Provinces specified in the table, is 18,871 to a population numbering a little more than 64 millions, being at the rate of 1 in 3,408.

In none of the districts of the Madras Presidency, nor in any of the Presidencies and Provinces specified, is the proportion of accidental deaths to the population so high as it is in England and Wales.

An analysis of Table VI. shows that by far the larger number of Accidental Deaths, viz., 70 per cent., occur by drowning, and that nearly one-fourth more males than females meet with their death from this cause, while three times more males than females die accidentally from other causes.

The causes generally of accidental deaths are much less numerous in India than they are in England.

In Central Middlesex, London, which may fairly be assumed to represent the whole of England in this respect, the principal causes of the largest number of this class of deaths, are in their order; suffocation at birth or in bed, burns and scalds, railways, machinery, and conveyances, while drowning forms but a small proportion of the whole.

In India, drowning occupies the first position, followed by Snake-bite and Wild beasts. The two last contribute about

20 per cent. of all accidental deaths in India, while they have no place whatever in England and Wales.

In the Central Provinces, Punjaub Territories and the Province of Oudh, from which districts only, data to strike an annual average were procurable, the yearly number of deaths from Snake-bite amounts to 2,108, and the deaths from Wild beasts in the same provinces amount annually to 926.

In the Presidency of Madras, as the next table will show, the number of recorded deaths from Snake bite, amounted in the years 1866 and 1867 to 1,890 and 1,810, and from Wild beasts to 303 and 334.

Deaths from Snake Bite and Wild Beasts in the Madras Presidency
for the years 1866 and 1867.

Years.	Snake Bite.		Wild Beasts.	
	1866.	1867.	1866.	1867.
Ganjam... ..	35	45	21	34
Vizagapatam	41	57	21	34
Godavery	81	68	48	25
Kristna	63	75	6	15
Nellore... ..	106	91	10	12
Kurnool	49	37	27	22
Bellary	49	56	5	4
Cuddapah	92	93	11	9
North Arcot	100	56	43	26
Madras... ..	56	70	...	...
South Arcot	147	162	17	37
Tanjore... ..	252	251	11	4
Trichinopoly	116	120	...	6
Madura... ..	159	124	14	9
Tinnevelly	71	47	2	8
Salem	109	96	9	6
Coimbatore	110	77	22	17
Malabar	181	220	12	15
South Canara	73	65	34	51
Total...	1,890	1,810	313	334

From this table it appears that in the Tanjore District no less than 252 deaths from Snake-bite were reported, and in the districts of Malabar, North and South Arcot, Salem,

Nellore, Coimbatore and Trichinopoly, the numbers range from 100 to 220, Nellore having the lowest and Malabar the highest number. In all the other districts, deaths from Snake-bite range from 35 to 92.

Deaths from Wild beasts appear from this table to be more frequent in the South Canara, Godavery and North Arcot Districts, the average numbers being 42, 36 and 34 respectively.

Vizagapatam, Kurnool, Coimbatore and Ganjam have average numbers ranging from 21 to 27, Ganjam having the highest and Coimbatore the lowest in these districts. In all the other districts, except in Madras and Trichinopoly, where there are none, the number of deaths from Wild beasts is under 20.

There is no doubt that many cases of death by Snake-bite occur that are never reported, owing probably to their occurring in remote districts, and it is certain that many more persons are carried off and destroyed by Wild beasts than are represented in the number recorded.

In the early part of the present year, the Officiating Conservator of Forests addressed the Chief Secretary to the Madras Government, with reference to four man-eating tigers, which were causing great loss of life along the whole range of the Nilay Mullay forest, from near Cuddapah up to the banks of the Kistna.

One of these tigers was reported to have killed upwards of one hundred persons before it was destroyed.

On another occasion very recently the Acting Magistrate of the Godavery District reported to Government, that the Runpa country, which comprises the Hill tracts, was overrun with tigers, that almost every village had lately suffered from the ravages of the man eater; that no road was safe, and that on one occasion a tiger charged a body of villagers within a few hundred yards of Kondada station.

If these cases could have occurred within a comparatively limited range of the Madras Presidency, it is not unreasonable to suppose that the numbers given in the table do not represent the entire deaths from Wild beasts.

Table VIII. contains an abstract of the annual average number of all classes of Unnatural Deaths in the several districts of the Madras Presidency. An analysis of this table

shows that South Canara has the highest number in proportion to the population, the ratio being 1 in 1,850.

TABLE VIII.—Unnatural Deaths in the Madras Presidency.
Yearly Average.

	Murder	Culpable Homicide.	Suicide.	Accidental Deaths.	Total.	Proportion to Population.
Ganj ^a m ...	33	17	61	308	419	1 in 2,713
Vizagapatam ...	19	9	80	369	477	1 in 2,968
Jeyppoor ...	...	...	15	89	104	1 in 2,885
Godavery ...	12	3	124	348	487	1 in 2,807
Kristna ...	12	4	75	306	397	1 in 3,009
Nellore.....	10	3	79	379	471	1 in 2,122
Kurnool ...	15	2	59	231	307	1 in 2,364
Bellary ...	29	3	97	388	517	1 in 2,388
Cuddapah ...	13	4	89	403	509	1 in 2,063
North Arcot ...	16	4	120	649	789	1 in 2,097
Madras ...	5	1	29	234	269	1 in 2,511
South Arcot ...	6	3	38	397	444	1 in 2,542
Tanjore ...	5	7	22	316	350	1 in 4,726
Trichinopoly ...	3	1	20	187	211	1 in 4,452
Madura ...	9	7	50	263	329	1 in 5,643
Tinnevelly ...	9	2	46	244	301	1 in 5,549
Salem ...	11	6	41	362	420	1 in 3,556
Coimbatore ...	10	5	79	477	571	1 in 2,129
South Malabar ...	16	5	58	289	368	} 1 in 3,063
North Malabar ...	9	1	25	155	190	
South Canara... ..	16	8	49	353	426	
Total...	*258	*95	1,256	6,747	8,356	1 in 2,897

With the exception of Trichinopoly, Tanjore, Tinnevelly, and Madura, the proportion of the total of Unnatural Deaths to the population of all the other districts, ranges from 1 in 2,063 to 1 in 3,556, Cuddapah having the highest and Salem the lowest proportion to the population. In the exceptional districts above referred to, the proportion ranges from 1 in 4,452 to 1 in 5,643, Trichinopoly having the highest and Madura the lowest proportion. For the entire Presidency, the ratio of Unnatural Deaths to the population is 1 in 2,897.

* These numbers are the averages for two years only, as complete data for a third year for each district were not procurable. The averages for three years, are respectively 248 and 288.

The per-centage of each class of Unnatural Deaths to the total number varies considerably.

In the districts of Ganjam, Bellary, Kurnool, Malabar and Vizagapatam, the number of Murders range from 4 to $7\frac{3}{4}$ per cent. of all Unnatural Deaths, Ganjam having much the highest and Vizagapatam the lowest of these districts. In all the other districts, murders range from $1\frac{1}{4}$ to $3\frac{3}{4}$ per cent. of the entire number of unnatural deaths, Trichinopoly and South Arcot having the lowest and South Canara the highest per-centage.

The precise per-centage of Murders to the total number of Unnatural Deaths in the Madras Presidency is 3·088.

Of Culpable Homicides, Ganjam has again the highest ratio, viz., 4 per cent. In all the other districts the proportion ranges from $\frac{1}{2}$ to 2 per cent., while for the whole Presidency the ratio of Culpable Homicides to the whole number of Unnatural Deaths is 1·137 per cent.

$25\frac{1}{2}$ per cent. of all unnatural deaths in the Godavery Districts are Suicides, a ratio much higher than in any other district. With the exception of South Arcot and Tanjore, the ratio of Suicides ranges from 10 to 19 per cent. of all Unnatural Deaths. In the districts above excepted, the ratio is as low as from $6\frac{1}{2}$ to $8\frac{1}{2}$ per cent., and for the whole Presidency the actual ratio is 15·031 per cent.

The ratio of Accidental Deaths to the entire number of Unnatural Deaths varies less than those of the other classes. Tanjore has the highest, viz., 90 per cent., and Godavery the lowest with $71\frac{1}{2}$ per cent.; while for the whole Presidency 80·744 per cent. of all Unnatural Deaths are accidental.

For all those Presidencies and Provinces specified in Table 9 the total per-centage of Murders to all Unnatural Deaths is 3·853, the Punjab Territories having by far the highest, viz., 6·582, and the Town of Bombay the lowest 2·674 per cent.

The total per-centage of Culpable Homicides for the places specified in the table referred to, is 1·402, the Punjab Territories having again the highest, viz., 2·465, and the Central Provinces the lowest, viz., 0·730 per cent.

The ratio of Suicide varies considerably, the Punjab

Territories having the lowest, viz., 5·601, and the Town of Bombay the highest, viz., 15·508, while for all the places specified in the Table (9) 11·934 per cent., of all unnatural deaths are Suicides.

The per-centage of Accidental Death varies very little in all the Presidencies and Provinces ranging from 79·670, (Bombay) to 85·043 (Central Provinces) per cent., while for all the places specified 82·836 per cent. of all Unnatural deaths are accidental.

TABLE IX.—Abstract of Unnatural Deaths.
Yearly average with proportion to Population.

	Murder.	Culpable Homicide.	Suicide.	Accidental Deaths.	Total.	Population.	Proportion to Population.
Madras	248	88	1,256	6,747	8,356	24,206,509	1 in 2,880
Bombay (Town)	5	4	29	149	187	566,119	1 in 2,996
Central Provinces	92	23	356	2,678	3,149	9,104,511	1 in 2,891
Punjab Territories	275	103	234	3,566	4,178	15,766,157	1 in 3,774
Hyderabad Assigned } Districts.	23	5	89	559	676	1,535,935	1 in 2,772
Mysore... ..	55	31	199	1,303	1,588	4,013,601	1 in 2,527
Total...	698	254	2,163	15,082	18,117	55,104,832	1 in 3,036

In calculating the proportion of all classes of unnatural deaths to the total number of deaths from all causes in each district of the Madras Presidency, the Mortuary returns of the year 1867, now preparing for publication and kindly furnished me by the President of the Sanitary Commission, have been taken as the basis. In the absence of any reliable mortuary statistics for a sufficient number of years to strike an average (the year 1866 being the first in which they were systematically compiled and collected) this was the only course that could be adopted.

The per-centages must therefore be considered as only indicative of the probable and not the actual proportion of unnatural deaths to the entire number of deaths from all causes.

In the Coimbatore District, $4\frac{1}{2}$ per cent. of the total deaths there are the result of unnatural causes. In the Districts of Ganjam, Vizagapatam, Godavery, Nellore, Bellary, Cuddapah and North Arcot, from 3 to $3\frac{3}{4}$ per cent. of all deaths are unnatural, while for all the other districts the proportion ranges from 1 to 2 per cent. Of all the districts, Coimbatore has the highest ($4\frac{1}{2}$ per cent.) and Tanjore the lowest (1 per cent.) proportion of unnatural to all other causes of death; while for the entire Presidency we find that $2\frac{1}{4}$ per cent. of the total number of deaths (359,781) are the result of unnatural causes.

One of the objects of the present statistical enquiry is to suggest such preventive measures as may be the means, if vigorously carried out, of reducing the number of one class of the unnatural deaths referred to in the table.

No measures can be suggested to prevent Murders or Suicides. These two classes of death will probably always bear a certain and uniform proportion to the population, or as expressed by a well known writer, they will be "committed with as much regularity and bear as uniform a relation to certain known circumstance as do the movements of the tides and the rotation of the seasons."*

In Great Britain and those countries on the continent of Europe from which reliable statistics have been obtained, it has been conclusively shown that very nearly the same number of murders and suicides occur year by year with such unmistakeable regularity as to have established a law that in a given time, in a given population, and in a given state of society, the absolute number of deaths from these

* Buckle on Civilization.

two specific causes, (as well as indeed from individual disease) is always nearly the same.

M. Quetelet, one of the first statisticians in Europe, states, as the result of all his enquiries, that "in every thing which concerns crime, the same numbers re-occur, with a constancy which cannot be mistaken; and that this is the case even with those crimes, which seem quite independent of human foresight, such for instance as murders, which are generally committed after quarrels, arising from circumstances apparently casual. Nevertheless, we know from experience that every year, there not only takes place the same number of murders, but that even the instruments by which they are committed are employed in the same proportion."*

The statistics for India, compiled from existing though confessedly incomplete and unsatisfactory data, do not however show the ratio of murders and suicides to the population to be so uniform and regular as elsewhere.

In the Madras Presidency for example, the number of Murders reported to have been committed during the years 1864, 1865 and 1866, amounted respectively to 272, 232 and 241, and of Suicides during the same years to 1,171, 1,242 and 1,388. The absence of uniformity in these numbers is probably more due to the fact, that cases of murder and suicide occur which are never recorded as such, and the ratio differs owing to the varying estimates given of the population. But with the systematic method recently introduced to obtain correct and reliable Mortuary returns, with a proper census of the population about to be taken and

* Table of the annual total number of Murders and instruments of murders in France abridged from Quetelet.

Modes of Murder.	1826.	1827.	1828.	1829.	1830.	1831.
Total number of Murders.....	241	234	227	231	205	266
By Gun and Pistol	56	64	60	61	57	88
By Knife.....	39	40	34	46	44	34
By Stones	20	20	21	21	11	9
By Kicks and Blows	28	12	21	23	17	26
By Cudgel Cane, &c.	23	28	31	24	12	21
By Stabs, Cuts and Bruises.....	35	40	42	45	46	49
By Other Causes.	40	30	18	11	20	39

with increased efficiency in the Police, it is highly probable that Murder and Suicide in India will be found to conform to the same law of a regular and uniform proportion to the population, so that "after making allowance for the impossibility of collecting complete evidence, we may be able to predict within a very small limit of error, the number of murders and of voluntary deaths for each existing period, supposing of course that the social circumstances do not undergo any marked change."

It is not then with reference to these two classes of unnatural deaths (murders and suicides) that preventive measures can be suggested; very different, however, is it in regard to accidental deaths.

The total number of these deaths for India, though proportionally less to the population than it is in England and Wales, has not yet reached its minimum. The causes which contribute to make up a large proportions of this class of deaths in India are more easily controlled and removed than those which exist in England.

In England for example, accidental deaths by machinery, conveyances, burning, and suffocation take the same numerical position as the same class of deaths by drowning, snake-bite and wild beasts in India. In the former a large number of these deaths is entirely due to carelessness and negligence on the part of the victim and is the direct result of a violation of specific and definite regulations by those whose lives are sacrificed.

In the latter (India) many accidental deaths are more incidental to the absence of obvious precautionary measures of a fiscal nature than to any want of care or foresight on the part of those who suffer.

First in importance as it is in number, as a cause of Accidental Deaths, is drowning.

Wells and tanks are, with rare exceptions, the most common places in which these deaths occur.

Every house and every garden has one or more wells. Many of these wells have parapets insufficiently high to prevent dangerous consequences, others have broken-down or insecure parapets, while it is no uncommon thing to find wells, even public wells on highways, without any parapet whatever.

To any one who has had opportunities of personally observing the unprotected state of many wells, public as well as private, it can be no matter for surprise that so large a number as 70 per cent., of all Accidental Deaths occur by drowning alone.

Wrongs must be known before remedies can be found. Here then we have a large number of lives annually sacrificed from cause palpable, obvious and preventible. The wrong is known and the remedy is obvious. Have the wells protected or surrounded with proper parapets and the fatal casualties will lessen. Sanitary Officers in India have at present the power to order the removal of all nuisances likely to prove detrimental to health or to endanger life. If they had (as they might easily have) equal power conferred upon them to order all wells within their individual jurisdiction to be properly protected with parapets, the number of accidental deaths by drowning and the loss of human life to the State would to a certainty be materially diminished.

It has not unfrequently happened that a body has been removed from a well or tank, within such a very short period after immersion, as to render it very probable, that life would have been saved, if proper measures to restore animation had been promptly adopted. Some seven or eight years ago several cases of this kind occurred in Madras, in which it was elicited during the course of the judicial enquiry into the cause of death, that the deceased had been taken out of the water within a few minutes after immersion, sometimes even with indications of life still remaining, but where the lives were lost in the absence of any attempt to resuscitate.

This was brought to the notice of the Madras Government, and the suggestions which were then given were at once approved of, and adopted, and published in the *Gazette*. These suggestions were to the effect that simple and detailed instructions of the means to be adopted to restore the apparently drowned, according to what is known as the Marshall Hall or ready method, should be printed in the different languages of the town of Madras and posted up in every Police Station. If the same simple measures were extended not only throughout every district of the Madras Presidency, but throughout all parts of India, there is every

probability, that many lives would be saved, which would otherwise perish.

Second in importance as a cause of accidental death is Snake-bite. In almost every part of India snakes of the deadliest character abound. The number of lives sacrificed by the bites of these venomous reptiles is almost incredible. In the Madras Presidency, no less than 1,890 and 1,810 deaths were recorded during 1866 and 1867, as having occurred from this cause alone, and it is believed that this does not represent anything like the entire number.

Preventive measures will at present alone avail to reduce the number of these deaths. No antidote for snake-bite has yet been discovered. Dr. Shortt has laboured more earnestly and perseveringly to find out the grand arcanum than perhaps any other man of the present day, but hitherto without success. In the absence then of any known remedy to cure the bite of a snake, there are two measures which, if adopted, would tend to reduce the number of deaths from snake-bite. The first is, that a reward should be offered by Government for every venomous snake killed. A reward is at present offered for every dog destroyed at certain periods of the year in order to prevent the risk, it is presumed, of death from Hydrophobia, (a very uncommon occurrence), it is surely not unreasonable to suggest that a reward be offered for every snake destroyed in order to prevent deaths from snake-bite which are infinitely more numerous.

The second measure is similar to the one adopted in Madras with reference to drowning, already referred to. Many persons of a highly nervous organization, it is believed, succumb to the shock and fright induced by the bite of a snake *free from venom*, whose lives might be saved if active treatment were at once vigorously and perseveringly carried out.

Detailed yet simple instructions of the means to be adopted printed in the vernacular languages of each district throughout India, and placed in every Police Station House, together with supplies of the most approved remedies to be used in such cases, might be the means of saving a considerable number of lives annually.

The third most frequent cause of Accidental death is wild beasts.

Tigers, wolves, and panthers more frequently destroy

human life than any others. The full extent of the havoc produced by these wild beasts can never be accurately ascertained. In many cases the human victim is carried off and entirely destroyed. Men in charge of railway signals have been carried off by tigers.

On one occasion, the danger signal at a point near a station on the Madras Railway being found unturned, the engine driver of the train, about to pass the station, stopped his train, when a large tiger was observed coolly walking along the platform, while those in charge of the station had fled for refuge to the top of the neighbouring water tank.

Powerful poisons (such as Strychine) and large steel spring tiger traps on the principle of a rat trap have been tried to destroy these wild beasts, but hitherto with very little success.

The only effectual measure is to offer rewards to men near those places where the wild animals are known to prowl about. The rewards generally offered by Government are too small to induce men to form themselves into a party for the purpose of destroying the wild beasts.* In some special cases the Madras Government has recently sanctioned a reward of one hundred rupees being given for all tigers bona fide killed in the hill tracts of the Godavery District as had already been done in the Vizianagarum District. If the same or even a larger reward were offered in every district where tigers are known to abound, we would certainly hear less of their depredations and of the dreadful sacrifice of human lives they cause. But when it has been ascertained that a tiger has carried off a human being, the reward ought to be much increased, for in such cases (human blood having been once tasted) the probability is, that the tiger will continue his depredations, as in one instance in the Madras Presidency where a man-eating tiger was reported to have destroyed within a brief period about one hundred human beings. The

* It appears that in the year 1867 the rewards given for the destruction of wild beasts in the four divisions of the Central Provinces amounted to upwards of forty-one thousand rupees. This outlay represents the slaughter of nearly three thousand beasts of prey—viz. :—902 leopards and panthers, 535 bears; 527 tigers; 475 hyenas; and 467 wolves. The greatest amount by far was paid in the Saugor district, viz., Rs. 7,135; and much more than half this sum (Rs. 4,520) was for the destruction of wolves (352). The item next in importance is one of Rs. 4,250 for the spoils of 86 tigers in the district of Raeporo in the Chutteesghurh division. Five of these Raeporo tigers are said to have been man-eaters, as were three in the Nagpore district, and one at Belaspore. Mention is also made of a man-eating panther, for whose death a reward was given of a hundred rupees!

whereabouts of these men-eating tigers are generally known, and as the risks and difficulties are greater than in the other case, a large beat should at once be organized to hunt down and destroy the animal.

If these measures were adopted immediately on the earliest intelligence of the first human life being sacrificed, the probability is that many other lives would be saved.

The Sanitary Commissioners appointed a few years ago throughout India have not hitherto directed their attention to such measures as would reduce the number of unnatural deaths of the class referred to, (accidental.)

That they have done much to preserve and promote the public health, reduce the tendency to disease and diminish the rate of mortality from natural causes generally, is beyond question.

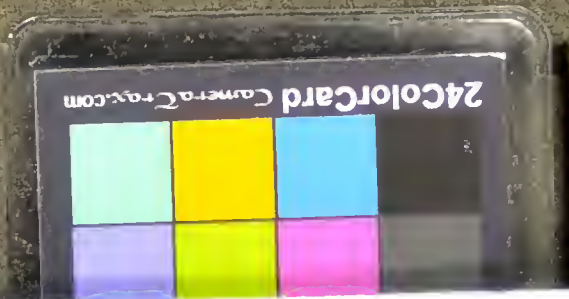
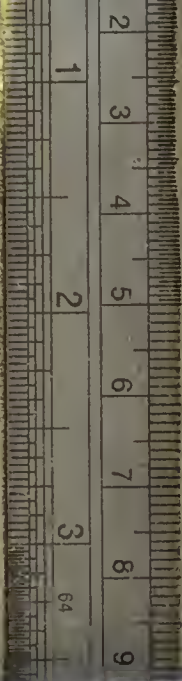
Epidemics are less frequent, and when they do occur, they are less extensive and less disastrous than they ever were before, whilst a comparison of statistics shows that the ratio of mortality has materially diminished. Short as the time is since these Sanitary Commissions were organized in India, the results moral as well as social have been so obvious and definite as to give the strongest confirmation, if such were required, of the old and familiar adage that "prevention is better than cure."

There is perhaps no other field in which the efforts of Sanitary Officers could be more profitably directed and where the results would be more satisfactory than that with reference to the causes of accidental deaths, for here preventive measures if vigorously carried out would, from the very nature of the causes, be the means of greatly reducing the present average number of this class of deaths to a much lower rate.

If every individual life is of value to the State, it is imposed on the State as a correlative obligation that it should surround human life with proper defences.

This is indeed the principle on which Sanitary Commissions have been organized in India and other countries. The schemes devised and the plans adopted by these Commissioners to surround human life with every protection and safeguard show that the lives of the people have become a chief subject of public concern.





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